

-17-

REMARKS

In response to the Office Action mailed on April 18, 2005, Applicants respectfully request reconsideration. Claims 1-3, 5-9, 11-13, 15-19, 21-24, 26, 29-32 are now pending in this Application. Claims 1, 11, 21, 22, 23, 26 are independent claims and the remaining claims are dependent claims. In this Amendment, claims 11, 12, 21, 22, 23, 26 have been amended and claims 33-36 have been added. Applicants believe that the claims as presented are in condition for allowance. A notice to this affect is respectfully requested.

The Office Action rejects claims 21, 23 and 26 as indefinite under 35 U.S.C. §112. As the Examiner is probably aware, the phrase "input/output" is a term commonly employed in the information processing field to describe the common operation of substantially simultaneous exchange of data to and from a computer processing device, particularly with respect to a user interface device such as a Graphical User Interface (GUI). Since this term is typically employed to refer to the often complementary exchange of related data items, it is often defining a more atomic exchange, rather than separate transactions. Applicant respectfully submits herein an amendment of "IO" as an industry accepted term applicable to this context. Applicant herein amends claims 21, 23 and 26 with the term "IO." Applicant further amends claims 11, 12 and 22 similarly. Acceptance is requested.

Claims 1-3, 5-9, 11-13, 15-19 21-24 and 29-32 were rejected under 35 U.S.C. §102(e) as being anticipated by Moir, U.S. Publication No 2001/0020956/A1. Applicants respectfully disagree with these contentions and assert that the present claimed invention is not anticipated by any disclosure in the Moir '956 reference.

The Office Action rejects claim 1. Specifically, the Office Action suggests that Applicant's assertion of runtime behavior is not claimed. The present claims recite, inter alia, complex constructs. A complex construct is an instantiation of a construct and one or more personalities, as described at page 18, line 20-page 19, line 4. The constructs define graphical (i.e. visual) characteristics and the

personalities define event listeners that provide specific event functionality for a certain purpose (Page 18, lines 27-28). The complex constructs implement application functionality (Page 20, lines 10-12). Implementation, therefore, refers to operation of a software application in which the complex constructs are embedded, because implementing functionality of a GUI is certainly a runtime aspect of a software application.

Moir '956, in contrast, does not disclose such complex constructs and makes no distinction regarding constructs and personalities. For this reason, Moir '956 cannot be said to show, teach or disclose the association of constructs and personalities in the claimed complex construct. In short, Moir discloses a graphical development tool for defining passive graphical displays. The Moir displays are passive because no manipulation of behavioral control is performed. While Moir discloses buttons, for example, the Moir approach only affects the appearance of the buttons, not the resulting behavior, or functionality, of the software application in which they are included or embedded. In contrast, the event listeners in the claimed complex constructs manipulate state and other event driven functionality. In other words, while the graphical manipulations of Moir '956 COULD be applied to a control structure, such as a button or slide, the graphics do not affect the BEHAVIOR of the underlying operation controlled by the control structure- they simply change the appearance of the button, slide, or other screen icon, and thus differ from the claimed personalities of the complex constructs.

In asserting the Moir reference with respect to claim 1, the Office Action points to paragraph 49. Paragraph 49 of Moir, however, discloses customization of "an elaborate, stylized logo" using graphic templates to avoid entailing the services of a graphic designer. Mot, therefore, is concerned with the passive visual attributes of the resulting graphic, not the definition of control structures employable by the resulting user application into which the logo is employed. The claimed event handling functionality, in contrast, defines control structures employed by the resulting executable user application which employs the state

change information responsively to the event handling. The event handling functionality is exhibited by the resulting instantiated, executable object (i.e. complex construct), as described at page 19, lines 5-9.

For example, the Moir '956 system can be used to change the appearance of a button, such as making it rectangular, square, larger or smaller, and may modify the text font inside the button. Moir does not affect the result achieved by the underlying application from activating (i.e. clicking) the button. In contrast, the event listeners of the present claims manipulate event listeners responsive to activation via the underlying application, and maintain state indicative of activation by the application (i.e. from a user "clicking" the displayed construct).

Accordingly, Applicants maintain that the claim 1 recitation of "receiving a selection of specific event handling functionality that is to be enabled for that personality in relation to a basic constructor object to which that personality is assigned," and "receiving a selection of a specific view which that personality provides to that basic constructor object when rendered on the graphical display of the computerized device" distinguishes claim 1 over the disclosure in Moir, alone or in combination, as the selection of such functionality of the instantiated object (i.e. runtime functionality) is not shown, taught, or disclosed by Moir. Claims 11, 21, 22, 23 and 26 recite features similar to claim 1 and are therefore submitted as also allowable for the reasons given above.

Further, with respect to claim 2, claim 2 recites a second complex construct. The complex constructs, as discussed above, combine a basic constructor type with behavioral attributes defined in a personality. Constructor objects, to which the personalities are applied, are instantiations of constructor types (Page 18, line 29-page 19, line 2). Such instantiations, or objects, as is known in the art, are runtime entities executed as a software application. Therefore, the claimed second complex construct is transformed from the first complex construct, and is performed to an instantiation of the constructor. Moir does not show, teach or disclose the claimed second complex construct because

Moir discloses no instantiation of an object from a type. Accordingly, Moir '956 cannot be said to suggest transforming such an instantiation.

Further, claim 33 has been herein added, to clarify and refine the subject matter of claim 2 by reciting "receiving, from an executing software application in which the first complex construct is embedded, a modification to the selection of a personality assigned to at least one of the basic constructor objects in the first complex construct," as discussed at page 22, lines 1-9, to further clarify and refine Applicants' claimed invention.

The Office Action suggests, in regards to claims 2 and 12, that Moir teaches transformation to a second complex construct at paragraphs 8 and 10. The cited sections of Moir disclose only rendering using at least one predetermined graphic parameter and at least one user defined graphic parameter. The graphic parameters identify various graphical attributes. The Office Action seems to suggest that the predetermined and user defined parameters anticipate the first and second complex constructs. The first and second complex constructs differ because the complex constructs each include a basic construct and a personality. The personality defines operational behavior of the complex construct, including state changes and control information used within an executing software application (page 20, lines 28-29). The Moir '956 graphic parameters make no teaching or suggestion about state changes and control information. Accordingly, it is submitted that Moir cannot be said to teach first and second complex constructs. Therefore, it follows that Moir makes no teaching, suggestion, or disclosure about transformation from the first complex construct to the second complex construct in response to user activity by the software application. Accordingly, it is respectfully submitted that the rejection of claim 2 be withdrawn.

With respect to claims 5 and 15, claims 5 and 15 recite objects as instantiations of classes. As is known in the art, a class is generally defined by a code fragment. The code fragment is compiled and instantiated at runtime as, or within, an object. Moir appears to teach an interactive interface to a graphic

-21-

development library, not runtime access by a software application. Further, the cited sections of Moir '956 make absolutely no suggestion of the claimed event handling framework provided by the instantiation (i.e. application execution). Accordingly, it is respectfully submitted that claims 5 and 15 are allowable.

The Office action rejects claim 7 and 17 in that Moir '956 discloses personalities having event listeners. The cited sections of Moir, however, merely disclose graphical attributes, namely 3d shaded buttons and parameter driven button resizing. As discussed above, these aspect of Moir disclose passive graphic visuals (icons), but do not manipulate control structures affecting the state of the instantiated object, as do the claimed event listeners. Claim 7, in contrast, recites event listeners corresponding to the personalities, which drive the management functionality in the instantiated object (complex construct), as discussed at page 20, lines 23-29. More specifically, claim 7 clarifies that "each applicable personality defines an extended set of event listeners that are specific to the basic constructor objects to which those personalities are applicable, and which extend the event management functionality provided by the basic constructor characteristics of the basic constructor type from which that basic constructor object is instantiated." Accordingly, claim 7 is submitted as distinguished from Moir because Moir does not show, teach, or disclose the claimed personalities, each defining an extended set of event listeners that extend the event management functionality over the instantiated basic constructor type. As discussed above, the claimed instantiation of the constructor object corresponds to runtime operations. It is respectfully submitted that claims 7 and 17 (similarly situated) are therefore allowable.

Further, Claim 34 has been herein added, to further refine and clarify the subject matter of claim 7, by reciting that the instantiation results in a "complex construct operable to exhibit operation defined by the personality and set of event listeners in a software application." No such operation and behavior by the constituent software application to which the instantiated objects are embedded is shown, taught, or disclosed in Moir '956.

Further, claim 35 has been herein added, depending from claims 11 and 15, to further clarify applicants assertion of selective behavior according to event driven state changes resulting from the corresponding software application executing the claimed complex constructs. Accordingly, claim 35 further clarifies applicants claimed invention by reciting that the "instantiation in the memory system, when executed, exhibits a behavior according to the selected personalities in the first complex construct, wherein the resulting instantiation is operable for execution on the computerized device, the instantiation operable in conjunction with a software application for executing the behavior defined by the personalities" (page 20, lines 25-19). Therefore, the complex construct including the base construct, or GUI type (e.g. button, dial, edit, or container object) performs according to a behavior, or instructions, defined in the included personalities. Such personalities, for example, typically include selective branching and execution based on the received input, as discussed at page 15, lines 3-12).

Claim 35 further clarifies applicant's claimed invention by reciting that the behavior further included "performing a state change responsive to the event listeners based on user input received in conjunction with the software application for performing the supplied methods and event handling processing. " In other words, the received input causes a state change in the instantiation (e.g. complex construct) which causes the instantiation to perform instructions based on the input. The received input, therefore, is an event that triggers the event listeners to perform the personality-defined behavior (page 25, line 27-page 26, line 3), and as discussed above.

It is respectfully submitted that claim 35 is in condition for allowance because Moir does not make any showing, teaching, or suggestion of behavior exhibited by the instantiations of the complex constructs (i.e. basic construct with personalities). Moir is directed only to graphical rendering of visual aesthetics. While the Moir '956 aesthetics are applicable to vehicles of control (i.e. can change the appearance of a button), Moir does not suggest event listeners for

-23-

receiving user input for state changes of an instantiated object. Indeed, Moir does not make any distinction about an object class (i.e. the basic constructor type) and an instantiation of the object (i.e. complex construct, or constructor object + personalities). Further, as new claim 35 presents subject matter already presented in claims 5, 6, 7 and 16, it is respectfully submitted that no new issues are raised and that therefore, no new search should be required. It is therefore respectfully requested that claim 34 be allowed.

Claim 26 stands rejected under 35 U.S.C. §103(a) as being obvious over Moir, U.S. Publication No 2001/0020956/A1. Claim 26, however is distinguishable from Moir '956 because Moir discloses only manipulating the graphical appearance of a screen object, specifically a graphical control icon, and makes no teaching or suggestion about combining the graphical appearance with a personality that defines the control exerted on the underlying application. The application of Moir to a graphical object that happens to be a control icon is not germane to the observation that Moir does not combine a personality with the graphic. Accordingly, one skilled in the art would not look to the present application to modify Moir '956 because Moir is presented as a graphical design tool to avoid the "employ of a graphic designer" (paragraph 4), and not for implementing a control structure for combining the active control of the personality with the claimed four basic construct types, for controlling the underlying application.

Further, claim 36 has been herein added, to further clarify the association of the personalities with the four basic constructs results in a control structure for controlling the underlying software application by reciting that the "combination of the basic constructor object with the selected personality defines an extended set of event listeners that are specific to the basic constructor objects to which those personalities are applicable, and which extend the event management functionality provided by the basic constructor characteristics of the basic constructor type from which that basic constructor object is instantiated, the resulting complex construct operable to exhibit operation defined by the

-24-

personality and set of event listeners in a software application." Accordingly, it is respectfully submitted that claims 26 and 36 are now allowable.

As the remaining claims depend, either directly or indirectly, from claims 1, 2, 5, 7, 11, 15, 17, 21, 22, 23 and 26 which by the foregoing remarks and amendments are deemed allowable, it is respectfully submitted that all claims are now in condition for allowance.

Applicant(s) hereby petition(s) for any extension of time which is required to maintain the pendency of this case. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 50-0901.

If the enclosed papers or fees are considered incomplete, the Patent Office is respectfully requested to contact the undersigned collect at (508) 366-9600, in Westborough, Massachusetts.

Respectfully submitted,



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